# MYRMECIA

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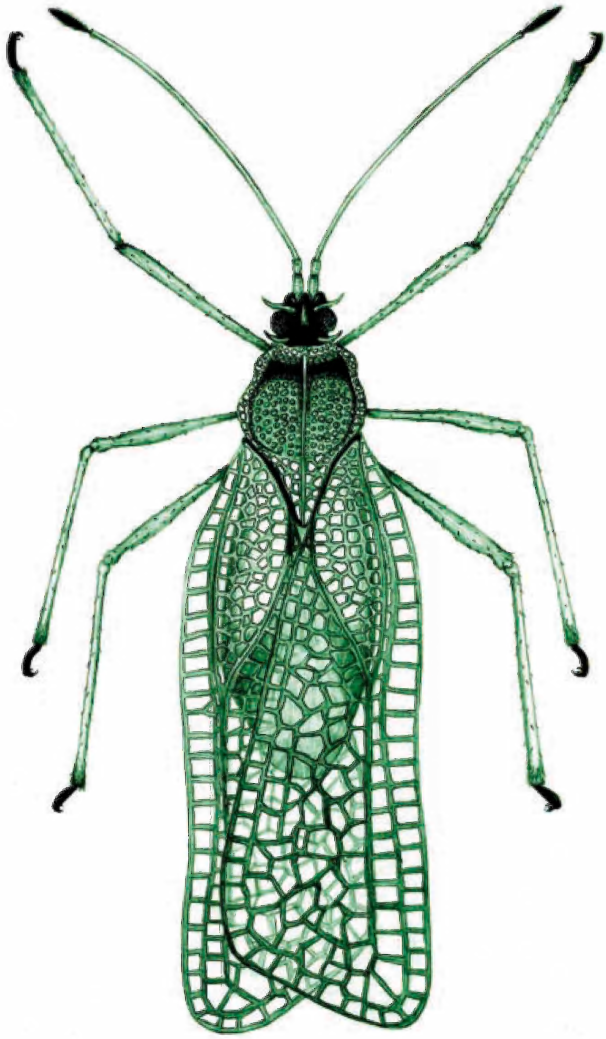

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# MYRMECIA

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## NOTICE

Statements made in *Myrmecia* do not necessarily represent the views of the Australian Entomological Society.

## ANNUAL REPORTS

### Treasurer's Report for 2008

This is my last report to you as AES Treasurer and I am pleased to end the four-year term of the Orange-based Executive on a positive note. The Financial Report circulated to the membership shows the Society to be in a healthy financial position with a surplus for the year to 30 June 2008 of $38,437. This is tempered to some degree by the loss in the previous financial year of $19,538. However that loss was largely a result of collecting membership subscriptions for six months only within that financial year as the change in the membership year was phased in.

Three other activities of the Society have also contributed to its solid financial position. All of the four annual Conferences held from 2004 have produced a surplus and the indications are that that trend will continue with your support of the 2008 Conference at Orange. Your Executive has continued to recommend the services of Sally Brown Conference Connections and this has proved beneficial in both the quality and smooth running of the conferences as well as their financial viability. Secondly, the Society Journal has been well supported and is therefore close to paying its way. This is through the efforts of both Chief Editor John Matthiessen and the team from Wiley-Blackwell. Thirdly, sale of Society merchandise has also contributed to the surplus because the stock was ordered and paid for prior to the term of the Orange Executive so the Society's financial position has benefited during the last four years. Special thanks to Jane Wright and Bruce Halliday (CSIRO Canberra) for their help.

Initially boosted by the highly successful ICE 2004 held in Brisbane, the financial reserves of the Society have also been strengthened. The current Executive applied the surplus from that Congress according to the recommendations from the membership at the 2005 AGM. Back issues of the journal of the Society were digitised and access made freely available. Promotion of entomological education is ongoing through the Carrick Project. The first payment has been made and funds held in reserve for the second payment of $5,000 due in this financial year. The

Small Research Grants fund was established and the first project offered support in 2007. Unfortunately due to a change in circumstances of the successful applicant, the first grant was not taken up. The fund now stands at nearly $83,000 and the interest generated is used to provide the Society's annual Small Research Grant.

Since 30 June, the Executive moved a further $45,000 into the "unrestricted term deposit" listed under Assets on the circulated Balance Sheet. This can be used by a future Executive in the event of a funding shortfall or, for example, to undertake an initiative such as a major publication similar to the successful and still sought after Upton booklet.

As positive as the Society's current financial situation appears, the separate report from the A/Membership Secretary warns of the impact of falling membership. Currently we are committed under the agreement with Wiley-Blackwell to pay for 600 AJE subscriptions with a membership of fewer than 500. The Orange Executive will recommend that the agreement with Wiley-Blackwell be renewed when it falls due at the end of next year and for its part, the publisher has agreed to base the new arrangement on 500 subscriptions. If the current trend in falling membership continues, this could provide financial challenges for a future Executive.

Graham THWAITE
Honorary Treasurer
Membership Secretary

As Treasurer of the Society, I continued to act as Membership Secretary until this meeting. One reason was to help the Executive complete the phasing in of the change in membership year approved by the 2006 AGM. This has not been without its challenges – quite a few members did not realise what had happened but I'm pleased to report that most issues associated with the change have now been resolved.

During this adjustment period, your Executive allowed members longer periods of time to pay their subscriptions than is set out in the Rules of the Society. That period of grace finished on 31 August 2008. Under the Rules, subs for 2007/08 should have been paid by 31 December 2007 to avoid suspension. Some members still owed subs for the six months ended 30 June 2007. The period of grace for those ended 31 July 2008. Sadly, despite pleas to affected members in both categories and promises of action from a few, some subs were not forthcoming so membership was suspended. The process to try to recover these slow subscriptions has been very time consuming. On the positive side, 14 people joined the Society during 2007/08 including five previously 'lapsed' members.

The decline in membership was the most serious challenge for the Orange Executive during its term and there is no indication that this situation will improve in the short term for the new Executive. New members are joining but more are needed to counteract the increasing number of resignations and suspensions. In recent months it was demonstrated that a proactive Regional Councillor can successfully recruit and I recommend to the Canberra Executive that they encourage Regional Councillors to be more active in this.

The table below gives the membership trends over the last four years:

| Category | At 30/06/05* | At 30/06/06* | At 30/06/07* | At 30/06/08 |
|---|---|---|---|---|
| Honorary | 6 | 5 | 5 | 4 |
| Full members | 439 | 368 | 366 | 360 |
| Retired members | 91 | 86 | 89 | 86 |
| Joint membership | 18 | 16 | 15 | 13 |
| Student members | 48 | 36 | 34 | 30 |
| Affiliated Societies | 3 | 3 | 3 | 3 |
| Sustaining Associates | 2 | 1 | 1 | 1 |
| **TOTAL** | **606** | **515** | **513** | **497** |
| *Myrmecia* subscriptions | 18 | 19 | 19 | 17 |

*Source: 2007 Report to AGM

From 1 July 2008, 22 members in total have been suspended for non-payment of subscriptions (see paragraph 2 above) and a further 10 have resigned effective 30/06/08. Fourteen new members have been added so the net loss for 2008/09 to the date of this meeting is therefore 18.

Since the last AGM, the following member has passed away:

- Ross Storey 14/06/08

Graham THWAITE
A/Membership Secretary

## FROM THE (FORMER) TREASURER

Thanks to those members who paid their 2008/09 subscriptions by the due date. At the time this item is being written, there are a few subs trickling in but a reminder has been sent to those still needing to pay. Please note the new address for subscriptions which appears at the top of the invoice. It is AES Treasurer, PO Box 3663, Weston Creek, ACT 2611.

The Treasurer's Report to the AGM appears elsewhere in this issue of *Myrmecia*. It is with regret that 22 people who were members of the Society had to be suspended because their subscriptions in arrears were unpaid. Suspension can be lifted once the money owing is paid. This is clearly spelt out in the Society's Constitution which can be found on www.austentsoc.org.au.

I wish Gordon Hooper well in his term as Treasurer of our Society.

Graham THWAITE

MYRMECIA

## NEWS BULLETIN EDITORS' REPORT 2008

Firstly, the editors are grateful for the contributions made to Myrmecia by members during the past twelve months and encourage people to continue submitting their information whether that be news, notice of events or opportunities for employment or scholarship. It is a publication put together for the members and without the continued input we have received from members Myrmecia would not exist.

A few changes have occurred on the Myrmecia over the past 12 months. The most significant was the change of editor, from Aaron Simmons based in Orange, NSW, to Sonya Broughton, based in South Perth, WA. The change went well, but a few teething problems should be expected over the next few issues. If you have any issues please let Sonya know, but also be patient. Myrmecia editors undertake the duty in their own time and, as much as they would like to be, but are not perfect.

The other major change has been the month in which Myrmecia will be distributed. In the past, the compilation of Myrmecia was undertaken two months before the date on the cover so it could be distributed with the AJE. This made it difficult to include the most up-to-date information from members, especially around the Christmas/New Year period and also put a lot of pressure on the editors. Future issues should still arrive in the same month but not, where relevant, with the AJE.

Aaron SIMMONS and Sonya BROUGHTON

## WHO IS THE NEW AES PRESIDENT?

I thought I would take this opportunity to introduce myself, and what I hope we might achieve over the next couple of years.

First some background. My genetic origins are Ukrainian and so is the name. Technically (legally as per birth certificate) I was christened Myron Philip Zalucki but it is actually pronounced Meron Fellep Zalutskeyj. Needless to say most "real" Australians cannot manage that, so I have answered to any permutation of those letters. I was born and raised in Canberra and did not 'speaka da English' till I went to school; in other words I had a fairly typical ethnic background for someone born in the 1950's.

I did my first Degree at ANU; a BSc with honours in Zoology. In 1977 I moved to Brisbane to do a PhD at Griffith University and, as ones PhD mentors will tend to remind you, I was

Roger Kitching's first student. At the time I was interested in how animals utilise resources in heterogeneous environments (I think we call these metapopulations or some such jargon these days), and Roger suggested I use Monarch butterflies and milkweed patches as a model system. That was my first serious exposure to insects and the rest is history. Well more or less.

I have continued to work on various aspects of monarch milkweed interactions and this research has led to many more questions than I have answered, and more importantly, many friends and colleagues. A similar story holds for research on the pest Helicoverpa in Australia. For this I am grateful to Gordon Hooper who, as head of the then Department of Entomology at UQ, hired a raw PhD graduate to teach Insect Ecology and then Pest management in 1981, on a part-time, temporary basis. Gordon suggested that if I was to work in 'Entomology" I should pick a major group of pests, and he suggested 'Heliothis' would be a good group. As with Monarchs, this work has led to the formation of many lasting collaborations with folk in Australia and overseas.

Since I have been privileged to work in a University for the last 27 years, I have had some input into the education of a large number of local and overseas students that have passed through UQ and other institutions. I'd like to think that they are suitably sceptical about textbook dogma, and can think a little more critically about matters than when they first started.

In a nutshell Entomology, the study of insects, has been good to me. Professionally I have travelled to many fascinating places - the USA, Canada, Mexico, Argentina, Brazil, New Zealand, Fiji, Tonga, Samoa, PNG, Indonesia, Vietnam, Cambodia, China, Democratic People's Republic of Korea, India, Sri Lanka, Oman, Italy and most recently South Africa. In all cases I have met and worked with many entomologists and I look forward to more of the same in the time remaining to me.

Personal highlights: finding an understanding partner in Jacinta and seeing four great kids – Yaramah, Nadia, Katrusha and Oressia - graduate (not in entomology)! Yes we thought we would give them Ukrainian names, as it does not seem to have harmed me.

***New AES president Myron Zalucki***

Career highlights so far: working with colleagues on the ICE that was held in Brisbane in 2004. Being awarded the MacKerras medal in 1996 (someone actually thought I was an entomologist)!

So what would I like to achieve as Society President in the next two years? I believe the society needs some invigorating and the executive will be working towards that goal over the next few years. Since the ICE in Brisbane, membership has been slowly declining. We would like to arrest that decline and see the society grow and become more active in all sorts of ways. To that end if you know of members that have left, try to find out why please. Then let us know and perhaps we can do something about it (I think that is called feedback in HR jargon). It is your society too.

I look forward to catching up with you at meetings in the future.

Myron ZALUCKI

## NEW MEMBERS

We welcome the following new members. The notes below were compiled by Graham Thwaite (former Membership Secretary) from the information provided with each application to join.

Elected 10 July 2008

**Briony Norton** is a PhD student in the Australian Research Centre for Urban Ecology within the School of Botany, University of Melbourn, Victoria. She completed both a BA and BSc (Hons) at the same University. Her honours research project explored the spatial patterning of *Ryparosa kurangii*, a tropical rainforest tree, in relation to anthropogenic disturbances and light levels. Her PhD project will further her interest in human impacts on ecosystems. Entomology is a new field of interest for Briony so she's looking forward to learning more through her own research and through membership of the AES. She was elected as a Student Member.

**Romina Rader** is undertaking a PhD through James Cook University's School of Marine and Tropical Biology, Queensland. Her project examines insect pollinator assemblages in four different land uses (dairy, orchard, cropping and remnant forest) to determining the impact of land use on biodiversity and the fundamental ecosystem service of pollination. Insect samples are collected monthly in each of the land uses on the Atherton Tablelands in Queensland and the Canterbury Plains of New Zealand. The study will produce a detailed understanding of the contribution to pollination services of remnant native vegetation in a range of land uses and quantify this currently unvalued ecological process. Romina was elected as a Student Member.

**Kelvyn Dunn** from Beaconsfield, Victoria was elected as a Full Member of the Society. His interest in butterflies was demonstrated through the article published in the August 2008 issue of *Myrmecia*.

Elected 13 August 2008

**Faheem Ahmad** is a PhD student based at the School of Natural Resource Sciences at the Queensland University of Technology, Brisbane. He obtained a BSc and an MSc both with Honours through the Bahauddin Zakariya University in Pakistan. He has skills in integrated pest management with special interest in biological control. Faheem was elected as a Student Member of the AES.

We especially welcome **David de Little** back to the fold after a few years absence from the Society. David is from Hobart Tasmania and was elected as a Retired Member. His entomological interests are in forestry having served as both a scientist and a manager in the private forest industry before becoming a Forest Health Consultant until his retirement in 2002. He is now Honorary Curator of Entomology at the Tasmanian Museum and Art Gallery. He is particularly interested in the taxonomy and biology of the Chrysomelinae and generally in insects associated with Eucalypts.

Australian Entomological Society's 39th Annual
General Meeting & Scientific Conference
Orange NSW 28 September to 1 October 2008

## 39TH ANNUAL GENERAL MEETING AND SCIENTIFIC CONFERENCE REPORT

Orange NSW, 28 September to 1 October 2008

We were almost overwhelmed by the response to our conference in Orange. Being another regional centre we were planning on around 80 delegates which is about the number who registered for Beechworth in 2007. However we ended up with 105 which gave us greater flexibility in the financial area but brought challenges as well. The conference dinner was booked into The Harrison which has a maximum capacity of 98. Fortunately, not all delegates attended the dinner. The greatest challenge was trying to fit all the contributed papers into a program of only three days with a number of timeslots already committed to keynote and invited papers. By asking a few to make posters instead, reducing the time for keynotes from 30 to 20 minutes and adjusting the timings for morning/afternoon teas and lunch, we were able

to squeeze everybody in. This meant we were on a tight schedule throughout the conference but the speakers and session chairs are to be congratulated for keeping to time although this often meant not having questions from the audience.

The main themes selected for the meeting were Taxonomy, Biosecurity, Ecosystems, Applied Entomology and Fruit Flies and contributed papers fitted together to make additional sessions on Biological Control and Feeding Biology. The opening Taxonomy Symposium marked the 250th anniversary of the publication, in 1758, of Linnaeus' *Systema Naturae* in which a binomial nomenclature was introduced for animals. The symposium looked at new directions in taxonomy and taxonomic processes and followed the satellite meeting, on the preceding Sunday, of the Council of Heads of Australian Entomological Collections. The Fruit Fly symposium on Wednesday brought together the main fruit fly workers of Australia and New Zealand and most stayed on to Thursday 2nd to have a talkfest workshop as well. A nice touch to end the final day was a dynamic reading of his poem entitled "Fred the Thread" by **Robert Hoare** of Landcare Research, Auckland.

***Jonathan Majer presents his Presidential Address***

***David Perovic, best student presentation***

Major sponsorship was received from the CRC for National Plant Biosecurity who also provided magnificent backpacks as the conference bags. Other sponsorship gratefully received came from Mortimers of Orange who lubricated the Welcome Reception, Orange Mountain Wines who did the same for the Poster Session and Genstat who provided the prize for the best student presentation. **David Perovic**, of CSU Orange, received this prize for his paper entitled "Following the movement of arthropods in an agricultural landscape using rubidium labelling".

The Society's Phil Carne Prize is aimed at fostering high quality entomological research in young scientists. The name of the prize celebrates contributions made by Dr Phil Carne to the science of entomology and the Australian Entomological Society. The prize is open to any honours or postgraduate student enrolled in an Australian University, either full-time or part-

time, who has not submitted their thesis by the closing date.

The Phil Carne Prize 2008 went to **Katherine Barry** of Macquarie University for her paper "Female praying mantids use sexual cannibalism as a foraging strategy to increase fecundity". It was unfortunate that illness preventing Katherine from attending and presenting her paper.

The usual high standard was achieved in both the Illustration Competition and the Photographic Competition. There were no Open Class illustrations submitted and only two entries in the Student Colour category. A first prize was given to **Olivia Parsonage** of the University of Newcastle in this category. The Student Black & White was, as usual, a reasonably large category with a number of strong contenders. The judges took some time to decide on the prize winners and these were: 1. **Megan Hurd**, of the University of Newcastle, and 2. **Amy Carmichael** of QUT. **Olivia Parsonage** and **Meaghan Meredith** both of University of Newcastle, were Highly Commended. Winners in the Photographic Competition were 1. **Birgit Löcker**, 2. **Amy Carmichael** and 3. **Herbert Heinrich**. **Holger Löcker** was Highly Commended.

One of the high points of the conference was the award of the 2008 Mackerras Medal to **David Yeates**. This is the society's highest honour and is only awarded every two years to an Australian entomologist under 50 years of age who has achieved excellence in entomology. The medal is named in honour of Dr Ian Mackerras, the Society's first President and an entomologist who embodied the excellence in entomological pursuits that the award recognises. For such an award to go to a taxonomist in this 250th anniversary year was fitting, but the judges had a tough decision to choose between a number of outstanding nominations.

The conference worked well and I pay tribute to the many people who helped to make this happen. The conference organising committee included **Peter Gillespie, Geoff Gurr, Emma Cottage, Danuta Knihinicki, Holger Löcker, Catherine Gitau, Aaron Simmons** and **Graham Thwaite** (*ex officio*). We were professionally supported by **Sally Brown** and **Tristan Claridge**, as usual. **John Betts**, the manager of OAI, and his staff gave very valuable assistance. **Chris Tyack**, Orange Camera House, took the conference photo and helped **Peter Gillespie** to judge the Photographic Competition. **Danuta Knihinicki** and **Debbie Kent** judged the Illustration Competition. The judges for the Best Student presentation were **Dinah Hales, Catherine Gitau** and **Alan Yen**. Finally, all delegates are now on diets having been fed so well by **Sue Betts** and **Marion Eslick** of Food on the Phone.

*David Yeates receives the 2008 Mackerras Medal from President Jonathan Majer*

Photos of the conference, taken by the official conference photographer **Holger Löcker**, appear elsewhere in this issue of *Myrmecia* and colour

versions can be found on the AES website at www.austentsoc.org.au.

Murray FLETCHER
Chairman
Conference Organising Committee

*Outgoing Executive at the AGM, Murray Fletcher, Jonathan Majer, Graham Thwaite and Geoff Gurr*

*Outgoing and Incoming Executive (L to R) Graham Thwaite, Geoff Gurr, Murray Fletcher, Alice Wells, Jonathan Majer, Myron Zalucki, David Yeates (absent: Gordon Hooper)*

*Audience at the Fruit Fly symposium*

*Convenor of the Fruit Fly sessions Peter Gillespie with keynote speaker Dick Drew*

*Spirit of Bob Marley at the poster presentation*

*Julie Dolle pours an Orange Mountain sample for Ian Newton*

*Geoff Gurr, Olivia Kvedaras and Margaret Williams discuss the posters*

*Networking in the foyer*

*Networking at the poster session*

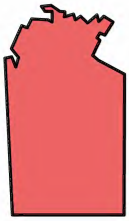
*Illustration Competition entries in the poster room*

*Conference Dinner at The Harrison*

*Photo: Chris Tyack, Orange Camera House*

# ENTOMOLOGY AROUND AUSTRALIA

## NORTHERN TERRITORY



### Department of Natural Resources, Environment, the Arts and Sport

Biodiversity Conservation Unit

**Michael Braby**, in conjunction with malacologist **Vince Kessner**, has been busy this year managing a new project funded by the Northern Territory Natural Resource Management Board dealing with the conservation management of threatened land snails (just a slight change from those winged lepidopterans!). Work to date has been concentrated in the Katherine-Victoria River District, which appears to be a biodiversity hot spot for these molluscs due to the extensive but patchy distribution of limestone and dolostone formations. The goals of the project are to: (1) collect baseline data on the identity, distribution and habitat preferences of all species in the region, (2) identify the threatening processes facing them, and (3) develop recovery plans and monitoring programmes for the most threatened species. Most species are narrow-range endemics, and many have not been formally described. Preliminary field trips were made in February and March to develop sampling protocols and negotiate with land holders. An aerial (helicopter) dry season 'snail muster' was run in July to survey the most inaccessible areas in which 60 sites were sampled.

Michael Braby also spent time on the Gove Peninsula in September completing targeted surveys for the Gove Crow butterfly. He was accompanied by **Steven Gregg** from the Museum and Art Gallery of the Northern Territory, and both worked closely with the Laynhapuy Aboriginal rangers.

### AQIS Northern Australia Quarantine Strategy (NAQS)

After two and a half years in Darwin, **Chris Norwood** has decided to accept a transfer to Perth. He will be missed by us all and we wish him well. In the meantime, **Stacey Anderson** is holding to fort for NAQS issues as **Glenn Bellis** continues to work with **Alan Dyce** on the subgeneric classification of Culicoides in Australia.

### Charles Darwin University – School for Environmental Research

A field key to the 41 species of lycaenid butterflies (Lepidoptera: Lycaenidae) that occur in the monsoonal Top End and Kimberley regions of north-western Australia has been completed and recently published (Franklin DC, Bisa D. 2008. Field key to the lycaenid butterflies of the Top End and Kimberley. Northern Territory Naturalist 20: 1-18). The key is designed to complement Michael Braby's 2004 field guide to Australian butterflies and includes sketches of key characters. A pdf on this paper is available on-line for free download at http://www.geocities.com/ntfieldnaturalists/journal.htm.

## AUSTRALIAN CAPITAL TERRITORY

### ANIC

ANIC staff have received two major awards in the last few weeks. **Adam Slipinski**'s book, *Australian Ladybird Beetles* (*Coleoptera*: *Coccinellidae*): *Their Biology and Classification* was awarded a prestigious Whitley Award Commendation in the 2008 Awards' Systematic Zoology category. *Australian Ladybird Beetles* reviews all 57 currently recognised Australian genera of Coccinellidae, including 260 described species, as well as adding descriptions of some new species and genera. Congratulations to Adam and his team for this recognition of a fascinating and informative book, which includes wonderful images and an important new identification key. We thank the Australian Biological Resources Study (ABRS) for their support in publication of this book.

**David Yeates** was awarded the Australian Entomological Society's 2008 Mackerras Medal. The Mackerras Medal is the Society's highest award and is given every two years to a member of the Society under 50 years of age who has demonstrated excellence in entomology. David's award recognises his enormous input into

understanding the taxonomy, systematics and evolution of flies, as well as his extensive support for Australian taxonomy in general. David became ANIC Curator of Diptera in 2001. His position is now funded in perpetuity by an endowment from the Schlinger Foundation, USA. He is a world leader in study of Diptera, both as a result of his own research, and his extensive network of collaborations. Congratulations to David on this well-deserved achievement.

Several ANIC scientists took part in the Society's conference at Orange. In his keynote address at the Linnaeus Symposium, **David Yeates** spoke of the need for the use of more modern and efficient practices to improve taxonomic productivity, improved training and support for the taxonomic workforce, and of the importance of maintaining collections to support taxonomic research. John LaSalle's paper stressed the need for increased use of modern technology in the generation and management of taxonomic information, including the possibility of automated discovery and description of new taxa. **Donald Hobern** demonstrated the use of modern technology and large-scale collaboration among different organisations, when he reviewed progress in development of the Atlas of Living Australia, which is available at http://www.ala.org.au. **Bruce Halliday** reported on the latest news on zoological nomenclature, especially current proposals to allow taxonomic publication in electronic-only media, the development of the Official Register of Zoological Nomenclature (ZooBank), and the start of planning for the Fifth Edition of the *International Code of Zoological Nomenclature*. Later in the conference, Darren Peck demonstrated the use of the AQIS remote microscope network, which will streamline the biosecurity diagnostic process, and Ainsley Seago spoke of the spectacular colours that beetles produce using

***Participants in the September 2008 aphid training course in ANIC. Left to right, Cameron Brumley, Department of Agriculture and Food, WA; John Wainer, Department of Primary Industries, Knoxville, Victoria; course coordinator Bob Foottit, Agriculture and Agri-Food, Ottawa, Canada; Desley Tree, Queensland Department of Primary Industries, Indooroopilly, Nicole Fisher (ANIC).***

diffraction gratings in their integument.
The ANIC thrips room was transformed for two weeks in September into an aphid workshop, where four trainee diagnosticians selected by DAFF were instructed in aspects of aphidology by the Canadian specialist, **Bob Foottit**. From field collecting and slide mounting to identification of aphid species, the four participants were set a cracking pace that culminated in an examination with a pre-selected 80% pass mark. **Desley Tree** (QDPI), **Nicole Fisher** (ANIC), **Cameron Brumley** (DAFWA) and **John Wainer** (VicDPI) succeeded, survived, and were in excellent good humour when **Laurence Mound** returned from California to reclaim his laboratory. **Dinah Hales** (Macquarie University) also took the opportunity to visit Bob Foottit, to talk about her own work on aphids. Laurence's overseas trip included running a thrips workshop at Riverside, together with **Alice Wells** and **Mark Hoddle**, using the new Thrips of California LucID system. Thrips of California was designed by Dena Paris, and is now available at http://www.lucidcentral.org/keys/v3/thrips_of_california/Thrips_of_California.html. It will form the basis of a comprehensive on-line system for thrips identification and information that will be available very soon. Now that this project is finished, Dena has decided to move on, and we wish her well in her new position.

The big news from the nematode laboratory was that **Mike Hodda** was President of the Organising Committee of the Fifth International Congress of Nematology in Brisbane, on July 13-18. The Congress attracted 364 delegates from 36 countries, and included papers on all aspects of nematode science, including soil biodiversity, systematics and phylogeny, control of insect pests using pathogenic nematodes, and management of nematode pests. Mike also found time for some work with **Sue Hockland**, of the Central Science Laboratory, York, who visited to work on identification keys to the genera *Aphelenchoides* and *Xiphinema*, which are important pests of international quarantine concern to a wide range of horticultural industries.

In Lepidoptera, **Lauren Helgen** from the Smithsonian Institution visited to examine and photograph types of some Geometridae as part of a project to produce an illustrated guide to the geometrid moths of Papua New Guinea. Lauren is using a new method for the enzymatic digestion of the soft tissue of the abdomen when preparing moth genitalia slides, to allow examination of morphology and DNA data from the same specimen, including old types. **John Hawking** visited the collection to look for aquatic Pyralidae, and Len Willan made one of his regular visits to discuss plans for the future development of Moths Online in the context of the Atlas of Living Australia. Bobbie Hitchcock travelled to the Kalgoorlie/Leonora area of WA to collect *Epiphyas* species to include in her PhD project on light brown apple moth and related species. Ted Edwards travelled to Brisbane to speak about the conservation of sun moths to the Richmond Birdwing Recovery Network. We were very pleased welcome back our old friend **You Ning Su**, who previously worked in the Orthoptera laboratory, and who has now been appointed as a technician working mainly in the Lepidoptera team.

Stephen Cameron's molecular systematics laboratory has been busy on a number of projects, most recently in a collaboration with **Denis Anderson**, in the use of genetic data to trace the origin of Asian honeybees that have been intercepted in quarantine in Queensland.
**Darren Peck** reports that the AQIS remote diagnostic microscope network is expanding, with the installation of new cameras in AQIS laboratories in Brisbane, Sydney, Melbourne and Darwin. Darren collaborated with **Liza Apps** of CSIRO Plant Industry to test the usefulness of the system for identification of plant pathogens, and preliminary results were very encouraging. Darren also spend some time in Sydney to gain some direct experience in the operational side of AQIS biosecurity procedures.

**Sally Thompson**, PhD student at the University of Adelaide, spent some time working in the Hymenoptera collection as part of her project on the systematics and biogeography of *Oxyscelio* and related genera of parasitic wasps (Scelionidae) with special reference to the

Australasian fauna. **Sujaya Rao** is an Associate Professor at Oregon State University (Corvallis), with special interests in pollination, IPM, biological control, and behavioural and chemical ecology of plant-insect interactions. She is visiting Saul Cunningham for 5 months to work on pollination, and has been spending time in ANIC identifying large collections of native bees. Steve Shattuck and Natalie Barnett went to Curtin University of Technology to talk to Post-Doctoral fellow Brian Heterick about progress on his review of the ant genus *Iridomyrmex*.

Sirinee Poonchaisri and Sunudhha Chaovalit, of the Thai Department of Agriculture, Bangkok, and **David Astridge** of QDPI, visited **Rolf Oberprieler** to discuss the identification of three species of mango weevils in the genus *Sternochetus*, two of which pose a significant biosecurity threat to Australian horticulture. **Hermes Escalona (**University of Maracay, Venezuela) visited for several months to work on a comprehensive phylogeny of several beetle families in the superfamily Tenebrionoidea. He has now moved on to New Zealand to continue this work with **Rich Leschen**, but we expect him to return to ANIC to continue his work with Adam Slipinski later in the year. Other Coleoptera visitors included **John Marris** from New Zealand, who visited for two weeks to work on the Cucujoidea for the Beetle Tree of Life, **Nathan Lord**, University of New Mexico, sorting through our collections of Bothrideridae, and **Rich Leschen** (New Zealand Arthropod Collection) and **John Lawrence**, who visited to work on sections of the Handbook of Zoology, and **Wioletta Tomaszewska** (Polish Academy of Sciences) and **Hong Peng** (University of Guangzhou, China), working on the ABRS-funded project on Coccinellidae. **Paul Zborowski** visited to identify some images that will be used in his new book on beetles, and **Chris Reid** came to look at ANIC specimens of Sagrinae (Chrysomelidae). **Tom Weir** and **Cate Lemann** went to the Department of Primary Industries, Fisheries and Resources in Darwin to validate the identifications of some beetles and bugs for APPD, and Tom also went to Sydney to identify specimens of aquatic Hemiptera and to locate specimens of cerambycid beetles that have recently been intercepted in quarantine.

Bruce Halliday

## QUEENSLAND

### FAR NORTH

**Kylie Anderson** reported the untimely demise of her computer. Since she could not access her computers, she was unable to send contributions. Kylie sends her apologies to anyone who sent in a story.

**News from the USDA ARS Australian Biological Control Laboratory**

A biocontrol agent for Old World Climbing Fern (*Lygodium microphyllum*), *Neomusotima conspurcatalis*, was released in Florida earlier this year. Field collection and preliminary evaluations of this defoliating moth were conducted by ABCL staff before it was shipped to Florida quarantine facilities. It is native to Australia and Asia and is widely collected throughout this region. In Florida it has been released at several locations and has established at one site on the east coast causing massive damage over an extensive area. The results are very promising.

**Bradley Brown** and **Jeff Makinson** have begun preliminary host range testing of the gall-forming scale insect, *Sphaerococcus ferrugineus*, a potential biocontrol agent for the paperbark tree *Melaleuca quinquenervia* in Florida. **Ryan Zonneveld** has been surveying the aquatic plant *Hydrilla verticillata* in SE Queensland but it has been extremely difficult to find given the recent drought.

**Army Malaria Institute (AMI)**

**Steve Frances** attended ICE 2008 in Durban in July, and then attended the 8th Mosquito Control Association of Australia and 10th Arbovirus Research in Australia symposium in Coffs Harbour in mid September. Before the MCAA/ARA meeting, Dr **Graham White**, from the US Army's Defence Warfighters Program (DWFP), based in Gainesville, Florida, visited AMI. Graham visited to review progress on a

DWFP project evaluating insecticide treated clothing being conducted at AMI. We also visited **Cecily Draper** and her team at the Moreton Bay Regional Council mosquito control laboratory at Redcliffe Airport.

As part of the Pacific Malaria Initiative, funded by AusAID, **Bob Cooper**, **Lloyd Cooper, Donna MacKenzie** and **Steve Frances** will spend up to 6 weeks during October-November collecting mosquitoes on the Santa Cruz Island group, Solomon Islands. The survey will be the first since the mid 1970's to determine the distribution, larval ecology and night biting habits of the malaria vectors in island communities where malaria elimination is being proposed.

Steve FRANCES

**SOUTH-EAST**

**Mosquito Control Laboratory, Queensland Institute of Medical Research (QIMR)**

**Peter Ryan** recently organised the 8th Mosquito Control Association of Australia and the 10th Arbovirus Research in Australia Symposium held between 15th - 19th September at Coffs Harbour. The theme of the symposium was "Preparing for the future - responding to emerging disease threats". Presentations included updates on mosquito incursions including *Aedes albopictus* in the Torres Strait, innovations in vector control, vector and disease ecology and the development of molecular tools for mosquito species identification. A large local contingent was joined by a number of international speakers, including our Vietnam-based students **Hau Tran**, **Le Anh Nguyen**, **Hoang Le Nguyen** and other colleagues. Hoang Le is currently undergoing training in mosquito population genetics using microsatellite markers at the University of Melbourne. Peter is currently based in Ho Chi Minh city where he is co-ordinating the Vietnam side of our Grand Challenges in Global Health and AusAID funded projects.

**Brian Kay** is facilitating activities associated with the National Health and Medical Research Council Program grant (Co-CI with **Scott O'Neill**, School of Integrative Biology, UQ) and Grand Challenges in Global Health projects evaluating the capacity of virulent *Wolbachia* bacteria for mosquito life-span reduction.

**Jason Jeffery** has been working with Vietnamese colleagues to define the temporal and spatial abundance of the *A. aegypti* population on an island field site in central Vietnam, as a prerequisite for a population replacement strategy using a strain of *Wolbachia* bacteria to eliminate dengue. He has also been working closely with Peter Ryan, **Leon Hugo** and Vietnamese collaborators in the design and construction of a large field-cage in Nha Trang, Vietnam, where experiments to test the gene transcriptional age-grading method can be done under more natural conditions. **Clara Cheah** is conducting laboratory evaluations of the effect of *Wolbachia* infection on the vector competence of *A. aegypti*. **James Monkman** arrived at QIMR in February and has been working with Leon characterising changes to mosquito proteins occurring during ageing. Work continues in the search for reliable age markers that can be targeted in high throughput age-prediction assays.

**Tim Hurst** continues to work closely with local governments throughout south east Queensland and with research collaborators in other states. One ongoing project is aimed at determining the relationships between water usage and storage and mosquito abundance in south east Queensland. This forms part of a larger project which will allow us to predict the impact of both evolutionary potential and changed human behaviour on the future distribution of *Aedes*. This project, funded by the Commonwealth Environment Research Facilities, is a collaborative effort between QIMR, Brisbane City Council and researchers in Melbourne, Adelaide, New South Wales and North Queensland. **Lance Maddock** joined the project in February and has been engaged in household surveys for mosquito breeding in Brisbane, Queensland, including the collection and the identification of mosquito immatures and adults. **Kay Marshall** continues to maintain mosquito colonies and provide material for experiments.

**Jonathan Darbro** arrived at QIMR in August. He is evaluating the potential of Australian isolates of the entomopathogenic fungus *Beauveria bassiana* as a novel method for control of *Aedes aegypti*. **Michelle Gatton** continues to evaluate the spatial and temporal distributions of arboviral diseases in Queensland. **Archie Clements** joined the laboratory in August on joint assignment between the laboratory and the School of Population Health, UQ, researching the spatial epidemiology of dengue in Vietnam.

Leon HUGO

**Queensland Museum**

Because of a few hiccups, it has been a few issues since our last Myrmecia report. In the last six months a lot has happened.

**Christine Lambkin**, **Chris Burwell**, and **Aki Nakamura** completed a survey of invertebrates on Lady Elliot Island and trained QPWS staff in trapping and survey techniques back in March. This was part of the Island Hitchhikers project that aims to manage pest invertebrate species found on islands of the Great Barrier Reef Marine Park. The project is part of a major pest management program called Pest Off in CQ established by Central Region QPWS. Aki has been employed to help with QM's part of this project. Aki has returned several times to island national parks in the area, for further survey work.

Another welcome helper is **Federica Turco**, who has been employed part time, to help with collection and survey projects. Federica hails originally from Rome and is a Coleopterist, whose PhD was on the systematics of Meloidae. She is currently in the field in North Queensland with **Geoff Monteith**, collecting fresh Carabidae for DNA work.

**Geoff Monteith**, although officially retired, is working as hard as ever. Earlier this year he travelled to many collections to check through databased dung beetles, ferreting out many errors as he went. In May Geoff spent a week in Mareeba with Ross Story working through the Mareeba DPI collection, in what turned out to be Ross's last week at work. Geoff Thompson also visited, while on leave and a reunion dinner was held, on Wednesday night, at Ross's place.

**Doug Cook** has decided on a career change, applying his methodical skills to a degree in accountancy before taking up a position with the Australian Taxation Office. Doug has helped Geoff Monteith in the field since the early 1970s. His bush skills and good humour helped us survive many strenuous field trips. In more recent years Doug has been a stalwart of Geoff's dung beetle project and in more general management of locality databasing, data-entry systems and labelling. Doug was the driving force in developing methods that have transformed the quality of data in our databases and streamlined the processes involved in getting accurate data into the system. He will be much missed about the place.

We have had many visitors to the collection, most recently **Miktat Donaglar**, from Turkey, who is spending a few weeks studying Girault Hymenopteran types.

Much effort has been put in by staff and volunteers, into sorting of ants and Diptera from the IBISCA Queensland project. A special issue of Memoirs of the Queensland Museum is planned to publish papers generated by the project. 150,000 flies have been sorted from malaise traps alone and 25-30,000 ants from the project have been sorted, mounted, labelled, identified and the data set has been analysed.

During National Science week Entomology ran three "Backyard Insects" workshops. A booklet was prepared for these workshops and **Chris Burwell** is currently working on its publication as a QM pocket guide.

**Christine Lambkin** has been heavily involved in the "Backyard Explorer" project. During National science week she was answering questions in person and online from schools. She is currently on leave, having firstly completed a combination of field work and school visits in Western Queensland. The day she returns from leave she heads straight to Toowoomba to give another "Backyard Explorer" workshop for teachers, with the help of QM teacher, **Allan Morrison**.

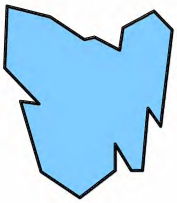
See http://www.qm.qld.gov.au/education/resources/wild/index.html and http://www.southbank.qm.qld.gov.au/learning/nsw/digital_stories.asp for digital stories and learning resources produced for "Backyard Explorer" and National Science Week.

We have also been concentrating on database and collection issues. All Queensland Museum databases across all collection areas (both Natural Environment and Cultural Heritage programs) are being merged into an overarching database using the Vernon Collection Management System. To date, data from 21 of the QM's 25 unique collection databases have been migrated to the new system. This includes most of entomology's data, approximately 133000 records, with another 10000 awaiting import.

A large part of our collection is being reorganised. Federica has been reorganising the spirit collection. Currently the ant collection is being consolidated to include 5 years' survey material. As part of Queensland Museum's review of collection infrastructure, storage quality and access, we will receive two new purpose-built cabinets to rehouse the historic F.P. & A.P. Dodd Collection of Tropical Insects and two additional 50 drawer cabinets for expansion of the Hemiptera and Hymenoptera. There are also plans to rehouse our entire slide collection to a purpose built compactus system.

In addition to this improved storage for the historic Dodd Collection, $27 000 has been allocated from the QM Foundation to enable the collection to once again be displayed at QM venues.

Geoff THOMPSON



## TASMANIA

**University of Tasmania (School of Agricultural Science and TIAR)**

**Paul Walker** attended the National Invertebrate Pest Initiative (NIPI) workshop in Melbourne in September to represent Tasmania and give an overview of pest problems in grains in the State. Paul also attended the Subtropical Forest Health Alliance Committee meeting in Brisbane in October to talk about recent progress in forestry chemical ecology research and to meet up with **Simon Lawson** and his research team. **Geoff Allen** and Paul continue to supervise honours students **Stephen Quarrell** and **Nicky Lynch** who have almost finished writing up their theses on European earwig ecology and *Clivina* spp. taxonomy, respectively. Having just presented their findings at the Australian Institute of Agricultural Science and Technology workshop, held at the University of Tasmania, Stephen was awarded 1st prize ($500) for his talk. Geoff and Paul are currently negotiating with Stephen for their share of the booty. Another student, **Raylea Parr** is working with Geoff on rearing the gum leaf skelentoniser (*Uraba lugens*) parasitoid *Cotesia urabae* for New Zealanders to assess their potential as a biological control agent, as run by **Lisa Berndt** from SCION in Rotorua. SCION are interested in extending the collaboration to test the host range preferences of *C. urabae*.

**Forestry Tasmania**

**Jane Elek** and **Belinda Yaxley** attended the International Congress of Entomology in Durban. Jane presented a poster on "How much do Eucalyptus leaf beetles eat?", co-authored with **Natasha Beveridge,** and a paper on "Reducing the chemical footprint when managing chrysomelid leaf beetles in eucalypt plantations: lethal trap trees", co-authored with **Vin Patel** and **Geoff Allen**. Since agriculture always attracts many more research dollars and researchers around the world, Jane was particularly interested to learn about innovative pest management in agricultural systems, including info-chemicals and their use in "push-pull" technology. The week before ICE, Jane attended the IUFRO Working Group, Recent Advances in Forest Entomology, hosted by FABI, Pretoria, to present a paper on "A review of methods and a proposal for managing and reporting environmental impacts of pesticides in forestry management". The 3-day field trip, travelling from Pretoria to Durban, showed Jane not only the devastation that invading

Australian insect pests cause in South African cloned eucalypt plantations, but also the serious threats that some of their native pests would pose to our forests if they invaded here.

**Department of Primary Industries and Water (New Town)**

**Cathy Young** attended the Forum Herbulot in Munich in June. This biennial conference brings together researchers on Geometridae from all over the world. The theme for this year's meeting was "Global strategies for plotting geometrid biodiversity in web-based databases (identification, classification, phylogeny)". Talks included presentations on web-based databases, molecular barcoding, new species, taxonomy and phylogentics. Cathy's seminar was an update on her work on the phylogenetics of the Australian emerald moths (Geometrinae). The conference culminated with a field trip spent collecting and photographing Lepidoptera in a conservation area in the Sesvenna region in the South Tyrol alps. Cathy took advantage of the trip to Europe to visit the Musee d'Histoire de Paris and the British Museum of Natural History (BMNH). In Paris, Cathy examined types of species of a problematic geometrid genus, *Chlenias*, to facilitate a taxonomic revision. She also looked at types of Australian Geometrinae and was fortunate enough to be allowed to remove one leg from several type specimens to further aid in the clarification of *Chlenias* and also the geometrine genus *Chlorocoma* using molecular analysis. At the BMNH, Cathy visited the collection of Australian Geometridae and Cossidae, and photographed a large number of genitalia preparations of type specimens, again to aid future generic revisions. Cathy found that the time spent in these museums was fascinating and very rewarding, both from an historical and taxonomic viewpoint.

**David de Little** travelled to Sydney in June where he caught up with **Chris Reid** at Australian Museum and discussed the identity of the paropsine chrysomelid recently established in Ireland on ornamentally grown eucalypts there which appears to have originated from Tasmania. David also I visited the South Australian Museum in Adelaide where he studied their holdings of paropsine chrysomelids which includes material collected by Blackburn and Chapuis.

Paul WALKER

## WESTERN AUSTRALIA

**Curtin University of Technology**

**Aaron Gove** has recently returned from a postdoc at the University of Stockholm, which featured fieldwork in Ethiopia. Since returning he has been involved in a field trip with **Rob Dunn** of North Carolina State University to the Queensland tropics to study ant-seed interactions, and is currently examining ant-seed interactions of the ant genera *Rhytidoponera* and *Melophorous* in Western Australia.

**Brian Heterick** is currently enjoying a one month stint in sunny (?!) California, looking at ants from Madagascar, and helping Malagasy students whom Dr. **Brian Fisher** of the California Academy of Science is grooming to be experts in particular formicid groups back in their own country. (The work was in question for a short period: after an unexpected visit to the 'Secondaries' area of San Francisco airport, courtesy of the Department of Homeland Security - never put a 'Yes' response on a downloaded document authorised by the USA Federal Government! - Brian was eventually able to resolve the situation). Madagascar is home to a bewildering variety of ants, including genera yet to be named. Almost as many as Southwestern Australia.'

**Richard Harris** has been appointed postdoctoral research fellow under the Alcoa Foundation Conservation and Sustainability Felowship Program. Richard is supervising students who are working on recolonization of insects and plants in an abandoned vineyard in the Ravensthorpe Ranges. Meanwhile, **Jonathan Majer**, having completed his presidency at the recent AES Conference in Orange, is departing for the Alcoa Foundation Convening in Barcelona.

**Department of Agriculture and Food, Western Australia (DAFWA)**

**Jessica Harrison** has recently been awarded an Honours scholarship from Cooperative Research Centre for National Plant Biosecurity (CRCNPB). The project is entitled "Assessment of the toxicity of reduced risk insecticides against a range of commercially available biocontrol agents for use in integrated pest management programs by the horticultural industry". Project supervisors are **Sonya Broughton** (DAFWA) and **Jonathan Majer** from Curtin University. She is testing a range of new reduced risk insecticides that being produced for the Horticulture Industry for the control of Lepidopteran, Coleopteran, Dipteran, and Homopteran insect pests. For example, the insecticide Spirotetramat is proposed for control of aphids, cicadas, grape louse, whitefly, cottony cushion scale and mealy bug in a range of horticultural crops. Whilst the efficacy of these selective insecticides is being evaluated against existing pests, not much is known of their potential impact (direct & indirect) on biocontrol agents. She has been conducting laboratory and semi-field trials at DAFWA on Chlorantraniliprole, Flubendiamide, Spinosad and Spirotetramat against THE parasitic wasp - *Trichogramma pretiosum* , green lacewing larvae - *Mallada signatus* and adults of the native ladybird - *Cryptolaemus montrouzieri.* Currently, Jessica is collating, analysing the data and writing up her thesis and expecting to submit the thesis in November.

**Modika Perera** has joined DAFWA Biotechnology group as a Policy officer in Biotechnology. She is working with **Sue Sutherland** and **Rosalie MacCaully** on development of National and State level Policy and Legislations for the regulations of dealings with genetically modified organisms.

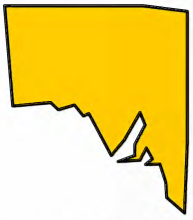
**Centre for Forensic Science**

**Ian Dadour** and **Sasha Vos** both attended ICE in Durban. They also attended the Australian and New Zealand Forensic Science Society meeting held in Melbourne in early October. At both conferences oral presentations were made on parasitic wasps and decomposition in vehicles. Recently, **Yvette Hitchin** successfully passed her Master of Forensic Science. Her thesis was titled "Development of a Multiplex Sequence Specific Primer (SSP) – PCR System to Identify Forensically relevant Calliphoridae".

Modika PERERA

***Honours student Jessica Harrison bags a corn plant***

## SOUTH AUSTRALIA



**John Jennings**, **Gary Taylor**, **Wahi Azmi** and **Sally Thompson** attended the AES Conference, Orange, and presented posters and talks.

**Kym Abrams**, **Andy Austin**, **Steve Cooper**, Tes**sa Bradford**, and **Michelle Guzik** attended the International 19th International Symposium of Subterranean Biology, Fremantle.

**Lars Krogmann** from Staatliches Museum für Naturkunde Stuttgart, Germany, has been visiting Andy Austin and the rest of the entomology group on North Tce.

**John Jenning**s was re-elected as Chairman of the Council of Australian Entomological Collections at their annual AGM held in conjunction with the AES Conference, Orange.

**Joanne Kent** has commenced a two-year position at SARDI Entomology as project officer to survey tramp ants in South Australia and that I am taking over from John Jennings as SA's regional councillor for the Australian Entomological Society.

Joanne KENT

## NEWS FROM AFFILIATED SOCIETIES

### Entomological Society of Victoria

Society meetings this year have included a talk by **Andrea Canzano** on the ecology of the Eltham Copper Butterfly. Finally, the President has realised that the annual president's address at the Annual General Meeting is not a statutory obligation but just an evil plot by long-serving members who have outlived the term and corporate memory of numerous presidents. Nevertheless, Peter Marriott spoke of some of his experiences with school children and their discovery of insects and our obligations to nurture these early interests. He then handed the meeting to **Melanie Birtchnell** who discussed drunkenness in honeybees, from a botanical rather than an entomological background. So captivated was Melanie by the procedures of the AGM that she volunteered to be newsletter editor once her Ph.D. was written up.

For something completely different we invited two scientific illustrators to address us on their work, and also invited two groups of Wildlife artists to the meeting, who greatly outnumbered members. **Enid Mayfield**, who studies and draws orchids and their pollinators, showed that pseudocopulations are more widespread than most of us realised. **Kate Nolan**, who works from the Museum's collections, concentrated more on her watercolour techniques and particularly enthralled our visitors.

With the proliferation of web sites featuring photographs and information about insects the society thought it timely to host a forum to review the status and opportunities of this medium. Invited speakers, guests and members discussed examples of websites, the need for some quality control, the ephemeral nature of webmasters and the need for long term security and web hosts, and the hope that new databasing techniques will make site maintenance much easier.

**Luke Watson** was the host for this year's excursion when he showed us around the AQIS facility at Tullamarine and described the Quarantine inspection and identification procedures. The colour issue of the Victorian Entomologist featured a checklist of Victorian hepialids, new field marks to distinguish the Griseargiolestes dragonflies known from Victoria, and the life history stages of Aglaosoma variegata (Lepidoptera: Thaumetopoeidae). The same issue had an article from Ary Hoffmann discussing the attributes that invertebrate climate change monitors should have.

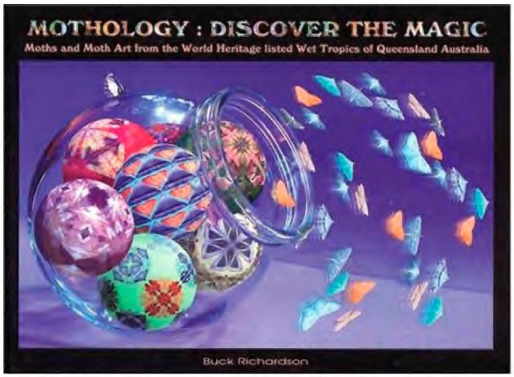
The big project, coming to fruition after many year's work particularly by **Peter Marriott**, is the publication of the first of a series of books on Victorian Moths. The plan is to produce an illustrated checklist of all moths recorded from Victoria, each with a photo of a set museum specimen and habitus photos wherever available. An included CD will contain additional information on distribution and flight seasons derived from label data of the Melbourne Museum and ANIC collections, and field observations. With a grant from The Wettenhall Foundation to seed the project the first volume on Bombycoidea is at the printer and the second volume is not far behind. Details should soon appear at www.entsocvic.org.au and information and order details can be obtained from vicmoth@entsocvic.org.au.

Any members of the Aust Ent Soc who are in Melbourne are very welcome to attend our meetings and details can be found on our website. Meetings are held at 8 pm till approximately 10pm on the Third Tuesday of each even month (2nd Tuesday of December) at

Museum Victoria's Discovery Centre, Carlton Gardens. Why not use the opportunity to have a de facto regional meeting and the chance to talk to each other. Pre-meeting dinner opportunities abound in local Lygon Street.

Ian ENDERSBY

## BOOK REVIEW


MOTHOLOGY : DISCOVER THE MAGIC
Moths and Moth Art from the World Heritage listed Wet Tropics of Queensland Australia
Buck Richardson

Mothology: Discover the Magic. By Buck Richardson. September 2008. Privately Published. 66pp., full colour, hardback. Landscape A4.

Available from info@leapfrogoz.com.au for $AUD 29.95. Postage free within Australia. Further information on www.leapfrogoz.com.au

Visitors to collections of moths frequently remark on the seemingly endless variety of colours, shapes and patterns on their wings. Juxtaposed bright colours often achieve a surprising harmony which can provide a wealth of new ideas for designs for fabric or print. In spite of the resolutions of such visitors few moth-based patterns and designs reach the market and those that do are usually of imaginary moths or crudely delineated European butterflies.

Buck Richardson has acted on his inspiration and masterfully employed beautiful colour photographs of resting live moths to produce a brilliant display of patterns and motifs.

This full colour book starts with a very personal introduction to moths and details the author's fascination with them, stories of his experiences and some points of view about moths and their biology. The style makes for interesting and entertaining reading. The term "mothology" is typical of the innovative spirit in the book as, while it might irritate some etymologists and entomologists, it is perfectly descriptive and self-explanatory. This introduction is fun, chatty and non-scientific but makes informative, reading but should not be taken too seriously by the pedant.

The author then goes on to illustrate some 370 species of (mostly) macro-moths found in his garden and about the town of Kuranda, Qld. These are all given their scientific names and it is greatly to the author's credit that he has gone to some trouble to obtain correct names for the moths illustrated. Many of the moths are shown against a black background and the author and printer are to be congratulated that the colour saturation of the images is such that almost all show up well and few of the patterns are lost in the black. These identified illustrations of moths represent a very useful resource for the collector and curator as many species from this World Heritage Area will not be found illustrated elsewhere.

The last third of the book takes the wonderful patterns of the moths and uses their elemental elegance to generate a host of colourful and imaginative designs. Moths are repeated in patterns, in plan form, globes, stars and mandalas. This is a fascinating spectacle of colour and design for any eye. These patterns are reminiscent of the displays produced by F.P. Dodd last century using set specimens but, with modern digital photography and image manipulation, such displays can now be taken much further. This book uses these techniques to the full.

The author does have an agenda and the book is a gentle way of advertising his (and his wife's) art as many of the designs are available commercially as silk-screen-printed scarves, posters and calendars, but in doing so he generously gives the reader much to appreciate without obligation to buy more than the book.

Ted EDWARDS

## REVIEW OF WEB-SITE

**Polyphagous Agromyzid Leafminers:**

**Identifying Polyphagous Agromyzid Leafminers (Diptera: Agromyzidae) threatening Australia's primary industries.**

CD and web based information portal and Lucid3 key by Mallik Malipatil and Peter Ridland.

http://www.lucidcentral.org/keys/v3/leafminers/background.htm

I first got wind of an identification tool for agromyzids when Mali kindly identified some specimens I sent him in 2003 and told me he was preparing something aimed to help workers recognise exotic agromyzids. At that time, there was no single publication to help distinguish the exotic pest species from Australian natives and few specialists in Australia were available to confirm identifications so our capacity to recognise an incursion of an exotic pest was somewhat limited.

Awareness of the threat posed to Australia's agricultural industries by exotic agromyzids was heightened following the global spread of a number of polyphagous *Liriomyza* species and the eastward movement of two of these, *L. huidobrensis* and *L. sativae*, through the Indonesian archipelago onto Australia's doorstep. This threat was eventually realised with a single detection of *L. sativae* in Torres Strait only weeks after the release of this identification tool. Full marks to Mali and Peter for their sense of timing!

The tool aims to assist in the identification of the major polyphagous pest species of *Liriomyza* and *Chromatomyia* and, importantly, how these may be distinguished from species already present in Australia. It offers a brief introduction to the family, including its economic importance, parasitoid fauna and biology and provides diagnoses to satisfy the user that what they are looking at is indeed an agromyzid. This is further expanded to explain the separation of *Liriomyza* and *Chromatomyia* from related genera. A background to collecting, preserving and examining specimens will encourage workers to get their hands dirty and have a go at working with these small flies. Throughout the portal extensive reference to literature and web-based information sources are provided.

The major contribution is a pictorial Lucid3 key which covers 19 species including two species of *Chromatomyia* (the most important exotic species and the single species present in Australia) and 17 species of *Liriomyza* (10 of the most important pest species in the world and seven of the 16 native species). Characters used in the key are well illustrated with good colour photographs or line drawings, each annotated and highlighting the pertinent character.

The taxa section provides details on the nomenclature, hosts, world distribution, key characters, notes on biology and pest status and information on parasitoids for each species and includes an extensive bibliography including useful websites.

I found the key and associated information to be extremely useful and only wish I had a wider variety of species to run through it. Most of the characters used are readily discernable although inexperienced users may find it difficult to navigate through some of the morphology of male genitalia. I would have preferred the portal to be wholly inclusive rather than referring users to other works for details of morphology but overall I think it is an excellent tool which will help workers to take the first steps in recognising an exotic agromyzid.

One of the best attributes of a web-based tool is the ease with which it can be amended, updated and expanded and the authors are committed to maintaining this portal as new information or better photographs become available. I only hope they can eventually expand the portal to include some of the other genera of important agromyzid pests.

The ever dwindling supply of competent taxonomists in Australia requires that we be careful with our demands on their time. The development of tools such as this will enable generalist entomologists to recognise the majority of local species themselves and reduce the number of specimens requiring a more expert eye. Eventually, this will give our overworked taxonomists more time to revise our fauna and to develop the next crop of specialists,

perhaps by producing more of this type of tool.

Glenn BELLIS

## ENTOMOLOGY IN THE NEWS

### ENTOMOLOGY AUSTRALIA

Entomology Australia is a new web-site devoted to raising the profile of entomological education in Australia. It has been initiated to complement the development of entomological courses for higher education.

Entomology Australia acts as a portal to obtaining information about insects in education at all levels, from primary school to university postgraduate level. Their aim is to act as a centre-point for discussion of educational topics, and news about insects. They also provide links to professional societies, the corporate sector, and educational institutions. For further information, visit the new web-site at www.entomology.edu.au

Please send feedback to:
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### BOUNTY HUNTERS

Donald Horning and his wife were holidaying at the Gold Coast earlier this year, when they found an article in the local paper advertising insects for cash. The Queensland Department of Primary Industries was offering a reward for anyone reporting fire ant infestation, with one nest worth $500. Donald thinks that it is the first time a bounty has been paid for insects in Australia. (April 30, 2008, The Gold Coast Bulletin).

**Fire ant cash reward plan**

**QUEENSLANDERS who spot fire ant nests will be in line for cash.**

The Queensland Department of Primary Industries yesterday launched the scheme to reward people who report fire ant infestations, offering $500 per nest.

Fire Ant Control Centre general manager Keith McCubbin said the initiative could completely eradicate the pest from Australia because Queensland was the last state with fire ants.

### INSECT EXPERT DISCOVERS NEW SPECIES ON EBAY

19 August 2008

http://www.rothamsted.ac.uk/corporate/PressReleases/PressReleases.php?PRID=48

***Fossil aphid in amber***

Dr Richard Harrington, Vice President of the Royal Entomological Society and Deputy Science Director at the Centre for Bioenergy and Climate Change, Rothamsted Research in Harpenden, Hertfordshire, acquired the insect, an aphid, for £20. His colleague Dr Colin Denholm initially spotted the item and made the purchase from an eBay member in Lithuania.

The fossilised insect is encased in Baltic amber approximately the size of a Smartie.

After examining the specimen with his team of aphid specialists, Dr Harrington sent the insect to Professor Ole Heie, a world expert on fossil aphids in Copenhagen, for identification. Professor Heie believed the specimen to be an unknown species of the *Mindarus* genus, and named it *Mindarus harringtoni* after Dr Harrington.

The aphid is thought to date back to around 35 to 50 million years ago, and from the plant remains found in the amber, it is thought that it originated from a tropical climate.

Aphids are small plant-feeding insects, and around 4,400 species are known. They vary in size from one to 10 millimetres in length and

many can cause substantial damage to agriculture, horticulture and forestry.

The aphid is now housed in the Natural History Museum and a full description of the insect has been published in the Royal Entomological Society's journal, Antenna.

Dr Harrington said: "I wanted the aphid to be named *Mindarus ebayi* but flippant species names are frowned upon these days! I'm delighted to have a work of nature named after me – even if it is an extinct fossil!"

## DID TERMITES HELP KATRINA DESTROY NEW ORLEANS FLOODWALLS?

14 October 2008

http://www.entsoc.org/resources/press_releases/2008_termites.htm

***Photo of Formosan termites by Scott Bauer (USDA)***

New research presented in American Entomologist suggests Formosan subterranean termites damaged New Orleans dikes.

Lanham, MD; October 14, 2008—Three years after Hurricane Katrina devastated New Orleans, people still speculate over causes of the destruction of the city's floodwall system. A new article in the fall issue of American Entomologist (Vol. 54, No. 3) suggests that Formosan subterranean termites played a large role.

Author Gregg Henderson, a professor at the Louisiana State University AgCenter, discovered Formosan subterranean termites (*Coptotermes formosanus* Shiraki) in the floodwall seams in August, 2000 – five years before Katrina struck – and noticed that the seams were made of waste residue from processed sugarcane. Known as bagasse, this waste residue is attractive to Formosan termites.

After the dikes were breached in 2005, Henderson and his colleague Alan Morgan inspected 100 seams for evidence of termites, including three areas where major breaks in the walls had occurred. 70% of the seams in the London Avenue Canal, which experienced two major breaks during Katrina, showed evidence of insect attack, as did 27% of seams inspected in the walls of the 17th Street Canal.

The Formosan subterranean termite originates from China, where it has been known to damage levees since the 1950s. Besides eating at bagasse seams, the termites may have contributed to the destruction of the levees of New Orleans by digging networks of tunnels, which can cause "piping," sending water through the tunnels and undermining the levee system.

"I believe that the termites pose a continuing danger that requires immediate attention," Henderson writes. "The fact that termites cause piping in levees must be accepted."

The author further suggests that New Orleans' 350 miles of levees and floodwalls should be surveyed for termite damage, and that treatment of the floodwalls and nearby trees may be necessary to avoid future disasters.

For further information contact: Richard Levine, rlevine@entsoc.org.

## COMING EVENTS

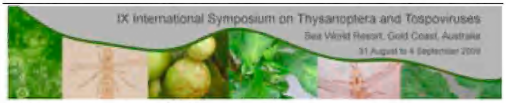
**AES 40th Annual General Meeting and Scientific Conference 2009**
Darwin, Northern Territory
25–28th September 2009

The Charles Darwin Symposium is an annual event supported by Charles Darwin University and the Northern Territory Government. In 2009, a special symposium will be held to mark the 200th anniversary of the birth of Charles Darwin, the 150th anniversary of the publication of The Origin of Species and the 170th anniversary of the visit of The Beagle to northern Australia. This symposium will be held 22-24 September leading into the AES joint conference.

**4th Biennial Conference of the International Biogeography Society**
Mérida, México, 8-12 January 2009
http://www.biogeography.org/4th%20conference.html

**3rd International Symposium on Biological Control of Arthropods**
Christchurch, New Zealand, 8-13 February 2009
http://www.isbca09.com/

**6th International IPM Symposium, 'Transcending Boundaries'**
Portland, Oregon, 24-26 March 2009
http://www.ipmcenters.org/ipmsymposium09




**IX International Symposium on Thysanoptera and Tospoviruses**

Sea World Resort, Gold Coast, Queensland, Australia, August 31 - September 4 2009.

A Symposium website is now available: http://www.istt09.org/ Further information, including indicative registration and accommodation costs, will be posted on the site in the near future.

## MEMBERSHIP NOMINATION FORM

To obtain a nomination form, please download from
http://www.agric.nsw.gov.au/Hort/ascu/myrmecia/aesmemform.pdf.

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**Bugs for Bugs**

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